China, Chile to Launch Joint Astronomical Data Center

An agreement to create the China-Chile Joint Astronomical Data Center was signed in Santiago between the National Astronomical Observatories, Chinese Academy of Sciences (NAOC), Huawei Chile, and the Technical University of Federico Santa Maria of Chile (UTFSM) on May 25, 2015.

Featuring the high-speed transmission, mass storage, and high-performance computing of massive astronomical data, the Center will facilitate astronomers from both nations to share the enormous data produced by the state-of-the-art telescopes based in Chile, such as ALMA in northern Chile, and to conduct cutting-edge scientific research based on these data. The establishment of the Center is not only an important step forward since the Chinese Academy of Sciences South America Center for Astronomy (CASSACA) was established in Santiago in October 2013, but will be a landmark event in China-Chile bilateral science and technology cooperation.

CASSACA, supported by NAOC under the Chinese Academy of Sciences, has access to strong S&T resources, while Huawei is a world leader in hardware manufacturing. UTFSM, as one of the top universities in computing science in Chile, has been instrumental in implementing the country's virtual observatory project.

According to CASSACA Director WANG Zhong, the new collaboration is of great significance for China to fill in its gap with the world in observational astronomy.

Thanks to excellent weather conditions and stable government support, Chile has become one of the world's most ideal places to host astronomical observation facilities. The country is now home to more than half of the large-scale telescopes built in the past twenty years. Meanwhile, the huge observational data produced by these telescopes need efficient transportation, storage and processing.

NAOC Deputy Director ZHAO Gang, Huawei Chile General Manager QIN Hua and USFSM President Darcy Fuenzalida inked the agreement on behalf of each party. Also present at the ceremony were Chinese Premier LI Keqiang and Chilean President Michelle Bachelet.

Geneticist Elected Foreign Member of Royal Society

LI Jiayang, a distinguished geneticist and CAS academician with the Institute of Genetics and Developmental Biology (IGDB), was elected into the Royal Society of U.K. as a foreign fellow on May 1, 2015.

"Professor Jiayang Li has made seminal contributions to establishing forward genetics approaches in rice and in using them to understand rice growth habit," according to the Royal Society's website. "He has identified and characterized key transcription factors and hormonal signals that determine rice architecture, and demonstrated that this fundamental knowledge can contribute to the development of improved rice varieties through marker assisted breeding."

His membership to the Royal Society has come in a proper time while China's contribution to science and technology has been recognized worldwide. This was evidenced by Sir Paul Nurse, President of the Royal Society, when he presented his welcome note by saying, "the scientists elected to the Fellowship of the Royal Society this year are leaders in their fields and have contributed much to the scientific endeavor. We are delighted to welcome them alongside the likes of great British scientist such as Newton, Boyle and Darwin".

After earning his doctoral degree in biology from Brandeis University in 1991 and conducting postdoctoral research at the Boyce Thompson Institute for Plant research, Cornell University, LI was recruited as a professor of plant molecular genetics by the former Institute of Genetics, Chinese Academy of Sciences in 1994. His main research interest has been molecular genetics of plant development and metabolism, focusing on the elucidation of molecular mechanisms underlying plant architecture and the starch biosynthesis in rice.

LI now serves as vice minister of agriculture of China and president of the Chinese Academy of Agricultural Sciences. He is also former director general of IGDB and former vice president of CAS.

He is the fourth outstanding scientist from China's mainland to be elected as a foreign member of the Royal Society. He is also a fellow of the Academy of Sciences for the Developing World (since 2004), foreign associate of U.S. National Academy of Sciences (since 2011), member of the German Academy of Sciences (since 2012), and academician of the International Eurasian Academy of Sciences (since 2014). He received the Corresponding Membership Award of the American Society of Plant Biologists in 2011.

Founded in 1660, the Royal Society of the U.K. is a fellowship of the world's most eminent scientists and is the oldest scientific academy in continuous existence.

CAS-NASA Workshop Calls for Joint Glacier Research via Earth Observation

Pooling together more than 40 renowned Chinese and U.S. experts in the field of glaciers and snow cover from a variety of institutions of the two countries, the CAS-NASA Workshop on the Use of Earth Observations to Address Glacier Change and Associated Hazards in the Hindu Kush Himalayas was convened from January 20 to 23 in Kathmandu, the capital of Nepal.

Initiated against the milestone China-US Joint Announcement on Climate Change, which was released in November 2014, the meeting was sponsored by the Chinese Academy of Sciences and the National Aeronautics and Space Administration, and jointly organized by the CAS Institute of Remote Sensing and Digital Earth (RADI) and the Earth Science Division of NASA, with support from the International Center for Integrated Mountain Development (ICIMOD).

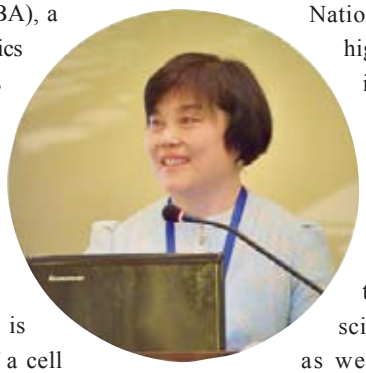
CAS President BAI Chunli and NASA Administrator Charles F. Bolden sent congratulatory letters to the workshop. "I am pleased to welcome experts from both the U.S. and China to get together in Nepal to discuss glacier change and associated hazards, and to explore means of using Earth observations to further enhance our scientific understanding about the Hindu Kush Himalayas", said President BAI in his letter. "I am delighted that U.S. and Chinese scientists will be exchanging information for the first time on Earth-observation products for glacier characterization," Bolder applauded.

RADI Director General GUO Huadong and Michael Freilich, Director of the NASA Earth Sciences Division, delivered keynote speeches at the opening session. In his

talk, GUO provided an overview of Earth observation for climate change in the Hindu Kush Himalayas region, and briefed on the application of international and domestic satellites in this regard. Freilich summarized the key historical and ongoing NASA space-based measurements, as well as related research programs and modeling capacities in this region.

The workshop also featured three breakout sessions, covering topics like glacier change and remote sensing of glaciers and snow, observations of hazards, and downstream effects on ecosystems and water resources. At the closing session, participants reached the consensus that as the Himalayas are a typical region most sensitive to global change, it is urgently important to have a comprehensive understanding of the change pattern of the key elements in the region's Earth system, including glaciers, rainfall, landforms, aerosols, surface radiation, disaster vulnerability, and downstream ecosystems.

Woman Biologist Appointed ABA President



The Asian Biophysics Association (ABA), a scientific organization that promotes biophysics research and education in the region, has appointed YAN Xiyun from the CAS Institute of Biophysics as its first ever female president. The announcement came on May 10 while she was presiding over the 9th ABA Symposium, the largest-scale biophysics conference in Asia-Pacific region.

As a specialist in nanobiology, YAN is known for unraveling the critical role of a cell membrane molecule, CD146, in blood vessel growth and developing an antibody for tumor therapy. She is also famous for her achievements in the field of nanomaterials and nanoparticles.

In 2012, her research received the second prize of the National Natural Science Award, which is the highest scientific award for science workers in China. Some of her patents have been used by companies in developed countries and regions such as the U.S., Europe and Japan, with contract value totaling up to 168 million yuan (27 million US dollars).

YAN is qualified for the ABA position through her "remarkable contributions to scientific study and technological research, as well as her rich working experience in international academic institutions", said an ABA council official.

Within a three-year tenure, Yan's appointment will hopefully lend a greater voice for Chinese scientists, especially women researchers engaged in the field.

Unveiling of Sino-Swiss Laboratory for Data Intensive Neuroscience

The Sino-Swiss Laboratory for Data Intensive Neuroscience was unveiled on March 26, 2015 by the Institute of Automation, Chinese Academy of Sciences (CASIA) and the Swiss Federal Institute of Technology in Lausanne (EPFL) in Beijing.

Brain-like intelligence is considered to be a revolutionary scientific discipline and major driving force behind the development of future intelligence science and information technology. Taking brain-like intelligence as one of its strategic directions, CASIA has established several research groups and centers related to this area, and initiated a number of international collaboration efforts in this regard.

According to plan, the Sino-Swiss Lab for Data Intensive Neuroscience will be hosted at CASIA and EPFL, respectively, focusing on the study of neuroinformatics, brain reconstruction algorithms, brain atlas research, etc.

Since 2013, scientists from CASIA and EPFL have been actively engaged in exchange and communication in the area of neuroinformatics. In September 2014, a CASIA-EPFL joint workshop was held in Lausanne, and the topics of discussion ranged from the advances of neuroinformatics to brain simulation. With later concrete negotiations, both sides agreed to launch the Sino-Swiss Lab for Data Intensive Neuroscience. Under this framework, CASIA and EPFL will both put researchers into the lab, promoting academic exchanges and collaborative projects.

The lab is also one of the first and concrete implementations of the CAS-EPFL MoU, which was signed between CAS Vice President LI Jinghai and EPFL Vice President Philippe Gillet last January in Davos, Switzerland, during a bilateral meeting on the sidelines of the World Economic Forum 2015. Both the CAS-EPFL MoU and the lab have received guidance and strong support from the

Chinese Embassy in Switzerland ever since.

Present at the launching ceremony were CASIA Director WANG Donglin, CASIA Deputy Director XU Bo, Sean Hill from EPFL and Michael Waser, deputy head of the Science, Technology and Education Section of the Swiss Embassy in China.

Chinese High Energy Physicist Bags Nikkei Asia Prize

WANG Yifang, a researcher and director general of the CAS Institute of High Energy Physics, received this year's Nikkei Asia Prize in Science, Technology and Environment during a special ceremony in Tokyo on May 20, 2015.

As the new-generation leader of China's high energy physics community, WANG not only proposed the well-known Daya Bay neutrino experiment with a detailed detector design and experimental plan to precisely measure the mixing angle theta 13, but played a key role in bringing together scientists from five countries and leading the team to discover a new type of neutrino oscillation, which is regarded as a major achievement towards better understanding matter anti-matter asymmetry in universe.

"Now we are working on a next generation neutrino experiment in Jiangmen," WANG revealed at the awarding ceremony, "which will involve hundreds of researchers from over 10 countries across the world. Basic science brings us not only technological revolution and a better life, but also a better, cooperative world. International collaboration is a must," he emphasized.

Mr. Fujio Mitarai, honorary chairman of the Nikkei Asia Prizes selection committee, spoke highly of the winners as "prominent figures of Asian power".

The awarding ceremony took place just before a two-day conference themed "Asia Beyond 2015: the Quest for Lasting Peace and Prosperity", which began on May 21 and was attended by high officials including Japanese Prime Minister Shinzo Abe and Chinese Ambassador to Japan CHENG Yonghua. This year, the Nikkei Asia Prize winners were invited to the banquet and introduced to all participants of the conference.

The Nikkei Asia Prizes, created in 1996 to commemorate the 120th anniversary of Nikkei Inc.'s main Japanese-language newspaper — *The Nikkei*, are designed to recognize outstanding achievements that contribute to the region's sustainable development and to the creation of a better future for Asia. The Prizes are given out annually in three areas of achievements: the Award for Economic and Business Innovation, the Award for Science, Technology and Environment, and the Award for Culture and Community.

WANG shared this year's awards with Vinamilk Chairwoman Mai Kieu Lien and the Hong Kong-based Asian Youth Orchestra.

Past winners of the science, technology and environment sector from China include YUAN Longping from Hunan Academy of Agricultural Sciences, ZHAO Qiguo from the CAS Institute of Soil Science, YANG Huanming from the Beijing Genomics Institute, and GAO Fu from the CAS Institute of Microbiology.

WANG is also laureate of the Zhou Guangzhao Award for Basic Sciences (2013) and the W. K. H. Panofsky Prize in Experimental Particle Physics (2014).

Applause for Conceptual Design of the Circular Electron Positron Collider

An international review meeting for the conceptual design of the Circular Electron Positron Collider (CEPC) was held at the CAS Institute of High Energy Physics (IHEP) from February to March, 2015 in Beijing.

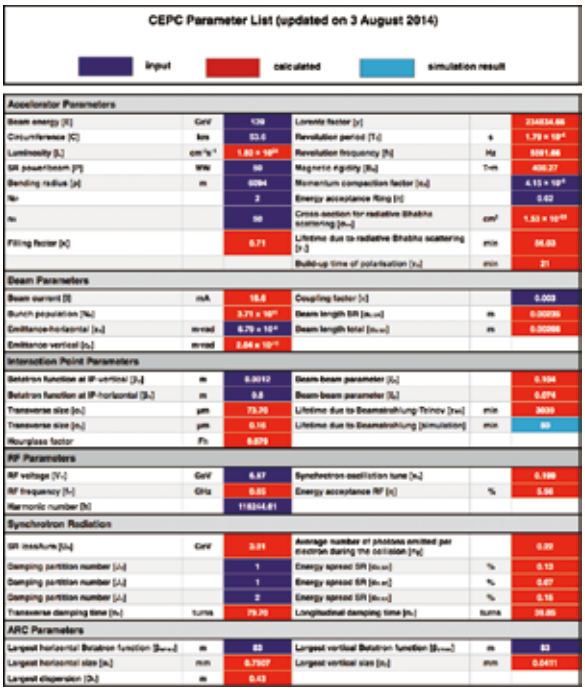
More than 30 leading scientists from around the world took part in the review, including Nobel Prize winner David Gross, former CERN Director General Luciano Maiani, former CERN Theory Division Director M. Mangano, former FNAL Deputy Director Young-Kee Kim, ANL High Energy Physics Division Director Harry Weerts, and KEK Accelerator Division Director K. Oide. Domestic experts including ZHAO Guangda from Peking University, CHEN Hesheng from IHEP, and XUANYUAN Xiaowen from the China Civil Engineering Association also attended the meeting.

CEPC was first proposed by Chinese scientists in 2012. For the first phase of the project, a Higgs factory will be built to precisely measure the parameters of the Higgs boson, further explore the Standard Model and Charge Parity violation, and look for clues of new physics beyond the Standard Model. The second phase of CEPC mainly involves the construction, in the same tunnel, of a 50-70 GeV proton-proton collider for new physics research.

The review of CEPC conceptual design was divided into four parts: its physics goals; accelerator design and technology; experimental physics, detector design and technology; and civil engineering and general facilities. In line with the design report, or the so-called "white paper", leading scientists from different CEPC systems also reported to the meeting.

The review panel concluded that the physics goals are reasonable, the design reports are detailed, and the location is good for large-scale underground construction. Above all, the design of CEPC is feasible.

The review panel was also impressed by the diligence of the CEPC team, which is mainly composed of the younger generation of scientists. The reviewers expected that the future collider will promote China's technical capabilities in many fields. They also put forward useful suggestions to further optimize its conceptual design.



CEPC is China's most ambitious scientific research project so far. When it gets the green light from the Chinese government, it could become the world's most important particle physics research facility for the next 50 years.

After this round of international review, which was completely on March 12, the CEPC people will work on to promote international collaboration and start the R&D of the future collider's key technologies at an early date. (Based on IHEP news release)

China Officially Launches Its No.1 Research Vessel

Kexue, or Science, which is China's most sophisticated research vessel by far, passed national evaluation and was officially put into operation on April 24, 2015 in the coastal city of Qingdao.

The 99.8m-long, 17.8m-wide and 4,711-tonne vessel, with a cruising capacity of 15,000 nautical miles and top speed of 15 knots, can travel with a crew of 80 for 60 days. With a total investment of 88 million US dollars, *Kexue* is designed as a major tool for China's deep ocean exploration missions in the next two decades. Compared with other research vessels, *Kexue* features high stability, more efficient control systems and a much larger lab space onboard. It will be used as a multiple-purpose research platform by oceanologists and alike across the country.

On September 29, 2012, the vessel was handed over from its manufacturer, the Wuchang Shipbuilding Industry Co., Ltd. to its operator, the CAS Institute of Oceanology which is based in Qingdao city. From April to May 2014, with a total of 46 scientists and technical staff on board, *Kexue* carried out its first ocean expedition to the west Pacific to explore the Pacific currents, regional climate and deep-sea ecology.

UCAS School of Public Policy & Management Kicks Off

On June 18 an unveiling ceremony marks the inauguration of the School of Public Policy and Management (SPPM) under the University of the Chinese Academy of Sciences (UCAS). Integrating the resources for research and education in the field of public policy and management at CAS, this new entity aims to develop into an internationally leading school excellent in research as well as a renowned think tank, and is anticipated to culture a Chinese school of public management with international influence.

Hosted by the CAS Institute of Policy and Management, SPPM has emerged pooling forces from the College of Technology Management, the Department of Public Management and the Department of Law under the College of Humanities and Social Sciences, and the Research Center for S&T Resources Management under UCAS, and integrating related teams from the CAS Institute of Geographic Science and Natural Resources Research.

According to Prof. FANG Xin, founding Director of SPPM, compared with well-known schools of public

management at home and abroad, the School features research and education in policy and management concerning S&T innovation, sustainable development and intellectual properties, as well as emergency management.